

BRAINMAPPING PROJECT UPDATE

by F. Holmes Atwater

F. Holmes Atwater, a retired military officer, has been a college instructor, scientific investigator, and behavioral engineer specializing in the desist and application of methods for developing advanced human potential. He received a B.S. degree from the University of Nebraska and completed graduate coursework in counseling psychology at the University of Northern Colorado. Mr. Atwater, associated with TMI since 1977, became the Brainmapping Project Coordinator in September of 1988.

In March 1989, TMI purchased a "BEAM" or Brain Electrical Activity Mapping type of device called the NRS24 and a computerized physiological monitoring instrument called the J&J System 1-330 and obtained funds for a research/laboratory effort which would:

- a. Objectively document the physiological (EEG and other) effects of current Hemi-Sync® technology.
- b. Develop improved Hemi-Sync processes, including the expansion of operating and productive functions.
- c. Provide individualized, professionally monitored, personal sessions for those who wish to examine their own brain patterns.

This effort, now called the Brainmapping Project, has as its purpose the improvement of the Hemi-Sync process itself. The Brainmapping Project is not a research effort designed to conduct studies to "prove" that Hemi-Sync works. Already knowing that the Frequency Following Response or FFR of Hemi-Sync entrains brain waves and alters states of consciousness, TMI's Brainmapping Project uses state-of-the-art monitoring devices to learn what brain-wave frequencies and patterns indicate these changing states of consciousness. The Brainmapping Project uses both an NRS-24 and a J&J System 1-330 to this end. The NRS-24 is a color topographic brain-wave mapping system which provides a user-friendly 24-channel data acquisition, analysis, and display environment. The J&J System 1-330 provides multichannel physiological monitoring. Both instruments work on separate IBM AT compatibles and, therefore, provide simultaneous brainmapping and physiological monitoring during sessions in the isolation booth in the TMI lab building.

In renewing topographic brain-wave maps, the first thing one notices is that the brain-wave patterns are never static but dynamically changing with ongoing thought processes. The misunderstood concept of one being fixed in something like a so-called "Alpha State" or "Theta State," due to a predominance of Alpha or Theta brain waves, quickly gives way to a new understanding. This new way of looking at brain waves clearly illustrates that the brain is

constantly undergoing electrodynamic changes. States of consciousness can no longer be defined simply as “Alpha State” or “Theta State” but must be identified by persistence, amplitude, frequency, coherence, and neocortical locale of brain waves. Brain-wave maps or patterns of persistence, amplitude, frequency, coherence, and neocortical locale yield vast amounts of information, much of which has never before been available to the researcher or technical monitor. The Hemi-Sync effect can actually be seen for the first time with these brainwave topographs. Under the influence of Hemi-Sync, identifiable, repetitive synchronous topographic patterns begin to emerge from the cacophony of brain activity. These same patterns are also abundant in subjects who are practiced in meditative skills but are not exposed to Hemi-Sync tones while being monitored. With this information, the subjective reports from numerous users of Hemi-Sync have been affirmed. States of consciousness once available only through months or years of study under a master teacher are readily accessible through the Hemi-Sync process.

The TMI Brainmapping Project continues to examine naive (never been exposed to Hemi-Sync) talented subjects, subjects practiced in Focus 10 and Focus 12, talented subjects who use Hemi-Sync during their activity, and talented subjects who do not use Hemi-Sync during their activity but have used Hemi-Sync to varying degrees. During these sessions in the isolation booth, brain-wave data is recorded by a computer using the NRS-24. The subject's narrative is recorded on tape and a register matching brain-wave data to subjective report is maintained. The J&J System 1-330 monitors and records via computer Skin Potential Voltage, Galvanic Skin Response, and Skin Temperature. A ledger equating brain-wave data and the subject's narrative with significant 1-330 physiological indicators is maintained. After a brain-wave mapping session in the booth is completed, a transcript of the subject's narrative is prepared and the analysis of the data begins. The brain-wave record must be examined in conjunction with the transcript and the physiological indicators previously noted.

As a final comment, it is interesting to note how subjects who have been brainmapped feel about their experience. Many have reported a sense of verification and reassurance of subjective experiences which would otherwise remain part of an elusive potpourri of unobjectified realities. One's exclusive electrodynamic state of consciousness is fully documented and reflects the brain's unique way of integrating the experiential or informational content of an individual's exploration into the realm of consciousness.

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